


# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference RL.P52857WO		<b>FOR FURTHER ACTION</b>		See Form PCT/PEAA416
International application No. PCT/EP2004/052168		International filing date (day/month/year) 14.09.2004		Priority date (day/month/year) 27.09.2003
International Patent Classification (IPC) or national classification and IPC H04Q3/00, H04L29/06, H04L12/66				
Applicant TELEFONAKTIEBOLAGET LM ERICSSON (PUBL) et al.				
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 7 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau a total of 4 sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>				
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input checked="" type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application</p>				
Date of submission of the demand  15.07.2005		Date of completion of this report  23.12.2005		
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016		Authorized Officer  Vercauteren, S  Telephone No. +31 70 340-1045		



INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITYInternational application No.  
PCT/EP2004/052168**Box No. I Basis of the report**

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements\*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

**Description, Pages**

1-9 as originally filed

**Claims, Numbers**

1-17 received on 15.07.2005 with letter of 14.07.2005

**Drawings, Sheets**

1/7-7/7 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
PCT/EP2004/052168

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**Box No. II Priority**

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1. ☐ This report has been established as if no priority had been claimed due to the failure to furnish within the prescribed time limit the requested:
- ☐ copy of the earlier application whose priority has been claimed (Rule 66.7(a)).
  - ☐ translation of the earlier application whose priority has been claimed (Rule 66.7(b)).
2. ☐ This report has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rule 64.1). Thus for the purposes of this report, the international filing date indicated above is considered to be the relevant date.
3. Additional observations, if necessary:
- see separate sheet**

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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	1-12, 14-17
	No: Claims	13
Inventive step (IS)	Yes: Claims	1-12, 16, 17
	No: Claims	13-15
Industrial applicability (IA)	Yes: Claims	1-17
	No: Claims	

2. Citations and explanations (Rule 70.7):

**see separate sheet**

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**Box No. VIII Certain observations on the international application**

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The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

**see separate sheet**

**Re II.**

1. The application claims priority of earlier national patent application GB0322711.3 filed on 27.09.2003. This priority claim, however, is not valid for the whole application resp. the whole set of claims, the reasons being as follows.

Claim 13 that is currently on file corresponds to the embodiment as described on page 7, lines 26-31 and as shown in Figure 6.

Claims 14 and 15 correspond to the embodiment as described on page 8, lines 1-24 and as shown in Figure 7.

Said claims resp. passages resp. figures can not be found in or can not unambiguously be derived from said earlier patent application. The priority claim for said claims is therefore not valid.

For the purposes of Rule 33(1) PCT, the international filing date for this part of the application is thus 14.09.2004.

**Re Item VIII.**

2. Claims 1-17 do not meet the requirements of Article 6 PCT for the following reasons.
  - 2.1 Although claims 1, 12-17 have been drafted as separate independent method claims, they appear to relate effectively to the same subject-matter and to differ from each other only with regard to the definition of the subject matter for which protection is sought. The aforementioned claims therefore lack conciseness. Moreover, lack of clarity of the claims as a whole arises, since the plurality of independent claims makes it difficult, if not impossible, to determine the subject-matter for which protection is sought, and places undue burden on others seeking to establish the extent of protection.

Hence claims 1-17 do not meet the requirements of Article 6 PCT.

- 2.2 In claim 1, it is not clear (Article 6 PCT), what is meant by "mapping" a connection,

i.e. the difference between "routing" a connection and "mapping" a connection is not clear.

**Re Item V.**

Reference is made to the following document:

D1: ANDERSON J AND WIRDE J: "3G-324M Video Client/server" MASTER OF SCIENCE THESIS, KTH DEPARTMENT OF TELEINFORMATICS, [Online] 25 January 2001 (2001-01-25), XP002315313 Retrieved from the Internet:  
URL:[http://www.student.nada.kth.se/~i95\\_wi](http://www.student.nada.kth.se/~i95_wi)  
[n/exjobb/Thesis\\_Andersson\\_Wirde\\_A.pdf](http://www.student.nada.kth.se/~i95_wi) [retrieved on 2005-01-26]

3. As far the **claims 1-11** can be understood (see the clarity objection raised in point 2), it appears that they meet the requirements of Article 33 (2) and (3) PCT, only in part, for the following reasons.

The document D1 is regarded as being the closest prior art to the subject-matter of claim 1, and discloses (the references in parentheses applying to this document) *a method of setting up and/or controlling a multimedia call (cf. Figure 9 resp. Figure 10) involving an H.324 (cf. 3G-324M) enabled user terminal (cf. VideoClient (Fig. 9) resp. 3G-324M Terminal (Fig. 10)) and a circuit switched connection (cf. HSCSD-connection (Fig. 9) resp. GSM(HSCSD)/UMTS-connection (Fig. 10) terminating at the user terminal and at a network node (cf. the VideoServer (Fig. 9) resp. the 3G-324M Content server (Fig. 10) or the 3G-324M/RTSP Media and Signalling Gateway (Fig. 10)), the method comprising:*

- *sending DTMF control signals over the circuit switched connection within H.245 protocol control messages (cf. page 13, last paragraph; page 35, section 3.1.3; page 43, section 3.3.1.2);*
- *data streams being multiplexed onto the circuit switched connection using the H.223 protocol (cf. page 11, section 2.2.1 and figure 1);*
- *at said network node, demultiplexing the received data stream to recover the DTMF signals (cf. implicitly disclosed since the network node can be controlled via DTMF signals);*

- [alternative 1:] on the basis of said DTMF control signals, routing or re-routing the connection ~~at an intelligent network node~~ to an appropriate data source  
or
- [alternative 2:] mapping the connection to an appropriate data source (cf. a camera or a precoded movie when connected to the VideoServer of Fig. 15 resp. a RTSP content server when connected to the 3G-324M/RTSP Media and Signalling Gateway of Fig. 10 - see also page 34, first paragraph and page 49, section 3.3.3, "reason" 1).

The subject-matter of claim 1 that defines alternative 2 is known from document D1 and therefore does not meet the requirements of Article 33 (2) PCT. The same applies to claims 2-11 that are dependent on claim 1 as such.

The subject-matter of claim 2 that defines alternative 1 differs from the method of D1 in that the (re)routing is performed at an **intelligent network node**.

The **technical effect** of this difference is an increased flexibility in controlling endpoint selection.

The **problem** to be solved by the present application is thus that the routing can not be controlled in a flexible way.

None of the available prior art documents discloses or hints at a solution by means of the features of claim 1.

Document D1 does not address the above problem. Further, the inclusion of an intelligent network node to flexibly control the routing is too big a step for the skilled to make without the exercise of inventive skill, since intelligent network based services are traditionally being used for devices that support only voice, not for multimedia devices, such as 3G-324M terminals.

The subject-matter of claim 1 that defines alternative 1 is therefore new and inventive and therefore meets the requirements of Article 33 (2) and (3) PCT. The same applies to claims 2-11 that are dependent on claim 1 as such.

4. As far as the **claims 12, 16 and 17** can be understood (see the clarity objection

raised in point 2), it appears that they contain essentially the same subject-matter as claim 1 defining alternative 1 (see point 3). Therefore, the subject-matter of these claims also meets the requirements of the PCT with respect to novelty (Article 33(2) PCT) and inventive step (Article 33(3) PCT)..

5. As far as the **claims 13, 14, and 15** can be understood (see the clarity objection raised in point 2), it appears that these claims do contain any additional feature with respect to the method of D1 resp. with respect to claim 1 defining alternative 2, which meets the requirements of the PCT in respect of novelty (Article 33(2) PCT) and/or inventive step (Article 33(3) PCT), since these additional features concern obvious design measures, extensions resp. alternatives and/or are already known from document D1.

Claims

1. A method of setting up and/or controlling a multimedia call involving an H.324 enabled user terminal and a circuit switched connection terminating at the user terminal and at a network node, the method comprising:
- 5 sending DTMF control signals over the circuit switched connection within H.245 protocol control messages, data streams being multiplexed onto the circuit switched connection using the H.223 protocol;
- at said network node, demultiplexing the received data stream to recover
- 10 the DTMF control signals; and
- on the basis of said DTMF control signals, routing or re-routing the connection at an intelligent network node to an appropriate data source or mapping the connection to an appropriate data source.
- 15 2. A method according to claim 1 and comprising sending the DTMF control signals within H.245 UII messages.
3. A method according to claim 1 or 2, wherein said network node is a video gateway.
- 20 4. A method according to claim 3 and comprising routing the circuit switched connection through said Intelligent Network node, the Intelligent Network node initially routing the connection to an appropriate video gateway on the basis of caller number, called number, or called or caller party location.
- 25 5. A method according to claim 4 and comprising, at the Intelligent Network node, subsequently re-routing the call to a telephone number located at the same or a different video gateway on the basis of a DTMF signal contained in an H.245 control message received at the Intelligent Network node.
- 30 6. A method according to claim 3 and comprising, at the video gateway, extracting appropriate H.245 control messages and forwarding these messages



to said intelligent network node, the intelligent network node determining, on the basis of a DTMF signal or signals contained within the forwarded H.245 messages, an address of a packet switched data source to which the circuit switched connection should be connected, establishing a packet switched  
5 connection to that data source, and relaying the packet switched data to the video gateway.

7. A method according to any one of the preceding claims, wherein said data source is a peer H.324 or H.232 user terminal.

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8. A method according to any one of the preceding claims, wherein said data source is a streaming server or video mail server.

9. A method according to any one of the preceding claims and comprising  
15 mapping a telephone number at which the circuit switched connection is terminated to a Universal Resource Locator identifying said appropriate data source.

10. A method according to any one of the preceding claims, wherein said  
20 user terminal is a 3G-324M mobile terminal.

11. A method according to claim 1 or 2, wherein said network node is said Intelligent Network node.

25 12. A method of operating an Intelligent Network node of a communications network, the method comprising receiving DTMF signals contained within H.245 control messages sent from a user terminal over a circuit switched connection, mapping the DTMF signals to associated telephone numbers terminating at a video gateway, and routing or re-routing the connection to the video gateway on  
30 the basis of the determined telephone numbers.

13. A method of operating a video gateway of a communications network,

the method comprising receiving one or more DTMF signals contained within an H.245 control message sent from a user terminal over a circuit switched connection, mapping the DTMF signal(s) to an address of packet switched data sources, and coupling the circuit switched connection to said data source over a packet switched network.

14. A method of operating a video gateway of a communications network, the method comprising terminating a circuit switched connection from an H.324 user terminal, receiving H.245 control messages multiplexed onto said connection using H.223, demultiplexing the H.223 stream to recover H.223 messages containing DTMF control signals, and forwarding these H.223 control messages to a service node disposed between the video gateway and a packet switched data source.

15. A method of operating a service node of a communications network, the service node being disposed between a video gateway and a packet switched data source, the method comprising receiving H.245 control messages from the video gateway, recovering from the H.245 control messages DTMF control signals provided by a user terminal, mapping one or more of the DTMF control signals to an address of the data source, receiving data from said data source over a packet switched network and forwarding the data to the video gateway.

16. A method of setting up and/or controlling a multimedia call involving a user terminal and a circuit switched connection between the user terminal and a video gateway, the method comprising:

routing circuit switched related signalling to an Intelligent Network, IN, node, with user initiated DTMF signals being contained within H.245 messages; and

at the IN node, detecting H.245 messages containing DTMF signals, and causing the service logic at the IN node to set up and/or control the circuit switched connection to the video gateway in accordance with the received DTMF signals.

17. A method of delivering streaming data over a circuit-switched access network from a packet-switched streaming server to a mobile wireless terminal, the method comprising:

5 at an Intelligent Network node, selecting a telephone number allocated to a video gateway;

sending a call setup message from said Intelligent Network node to said telephone number and establishing a circuit switched connection between said terminal and the video gateway;

10 at the video gateway, identifying a packet-switched network address associated with said telephone number; and

receiving streaming data from said packet-switched network address, and forwarding the data to said terminal over said circuit-switched connection.